学校编码：10384 密级_____
学号：22320111154326

厦门大学

硕士学位论文

美国政府应对溢油事件研究—以 2010 年深水地平线钻井平台溢油事故为例

U.S. Governmental Response to Oil Spill: Case of "2010 Deepwater Horizon Oil Spill"

MUGENI Marie Rosine

指导教师姓名：方秦华 博士 副教授
专 业 名 称：海 洋 事 务
论文提交日期：2013 年 5 月
论文答辩时间：2013 年 6 月

2013 年 05 月

美国政府应对溢油事件研究—以 2010 年深水地平线钻井平台溢油事故为例
MUGENI Marie Rosine 教师 方秦华 副教授 厦门大学

厦门大学学位论文原创性声明

本人呈交的学位论文是本人在导师指导下,独立完成的研究成果。本人在论文写作中参考其他个人或集体已经发表的研究成果，均在文中以适当方式明确标明，并符合法律规范和《厦门大学研究生学术活动规范（试行）》。

另外,该学位论文为(　　)课题(组)的研究成果，获得（　　）课题（组）经费或实验室的资助，在（　　）实验室完成。（请在以上括号内填写课题或课题组负责人或实验室名称，未有此项声明内容的，可以不作特别声明。）

声明人（签名）：

年　　月　　日

厦门大学学位论文著作权使用声明

本人同意厦门大学根据《中华人民共和国学位条例暂行实施办法》等规定保留和使用此学位论文，并向主管部门或其指定机构送交学位论文（包括纸质版和电子版），允许学位论文进入厦门大学图书馆及其数据库被查阅、借阅。本人同意厦门大学将学位论文加入全国博士、硕士学位论文共建单位数据库进行检索，将学位论文的标题和摘要汇编出版，采用影印、缩印或者其它方式合理复制学位论文。

本学位论文属于：

（　　）1.经厦门大学保密委员会审查核定的保密学位论文，于　　年　　月　　日解密，解密后适用上述授权。

（　　）2.不保密，适用上述授权。

（请在以上相应括号内打“√”或填上相应内容。保密学位论文应是已经厦门大学保密委员会审定过的学位论文，未经厦门大学保密委员会审定的学位论文均为公开学位论文。此声明栏不填写的，默认为公开学位论文，均适用上述授权。）

声明人（签名）：

年　　月　　日

Declaration

The research described in this thesis was conducted under the supervision of Dr. FANG Qinhua from College of Environment and Ecology, Coastal and Ocean Management Institute, Xiamen University.

I, MUGENI Marie Rosine, declare that all the work presented in this dissertation entitled *"U.S. GOVERNMENTAL RESPONSE TO OIL SPILL: Case of "2010 Deepwater Horizon Oil Spill"* is my original and has never been presented elsewhere for any academic qualification in any University or Institution of Higher learning.

MUGENI Marie Rosine

Signature……

Date……

Copyright Agreement

MUGENI Marie Rosine

Signature……

Date……

CONTENTS

ABSTRACT

Offshore oil exploitation is fast becoming an important component in the world's oil and gas industry. There is a strong pressure from governments for increasing the offshore exploration and production activities to meet the growing domestic and international demand for oil and gas. This have been causing oil spill incidents all over the world as the oil spill prevention is not an easy task; Oil spill is defined as an accidental release of oil into a body of water, from a tanker offshore drilling rig, or underwater pipeline, often presenting a hazardous marine life and the environment or a layer of oil floating on water or covering the shoreline of a body of water or covering the shoreline of a body of water; usually petroleum which has leaked from an oil tanker.

Oil spill causes significant impacts to marine life, the reason why measures should be taken for prevention and deal with oil spill accidents in the World. In order to better manage oil spill different responses had been established all over the world; U.S. Government is one of the typical examples in dealing with oil spill, the oil spill governance in the U.S. implicate different agencies like federal agencies, states and international authorities. This paper analyses the US Government responses to oil spill using the example of "2010 Deepwater Horizon oil spill" which happened in the Gulf of Mexico causing the worst impacts in history as it was a very huge oil spill in the world. Many articles wrote on this big event; this research is a synthesis of different ideas from many authors analyzing how the U.S Government have been dealing with this problem, where it has been successful, where it failed and what kind of lessons other countries can learn from the U.S. Government response to oil spill.

After a long analysis, the findings show that the U.S. Government response have been good in some cases but not very successful as the spillage is still spreading up to now and the consequences still exist. An international implication and improvement of the technical responses could make it very successful. The successful part is how everyone in the U.S. even the public got involved in this event and valued this oil spill accident viewing this as a disaster, other countries should learn from this and improve the stakeholders' involvement in environment protection and rehabilitation.

Keywords: U.S. Government Response to Oil Spill; Oil Spill; 2010 Deepwater Horizon Oil spill; NOAA; EPA

摘 要

深海勘探开发正迅速成为世界油气产业的重要组成部分。来自政府间的巨大压力促进了外海勘探与生产活动，以满足日益增长的国内外油气需求。鉴于防止溢油的难度，这导致了遍及全球的溢油事件。溢油被定义为石油意外性地从油轮、海上钻井装置或者海底管道排放到水体中，危及海洋生物和环境，通常表现为油层漂浮在水面上或者覆盖在海岸线上。

溢油会对海洋生物造成重大影响，这也是世界各地采取措施以防止和应对溢油事件发生的原因所在。为了更好地管理和清理海洋环境中的溢油，世界各国均建立了不同的反应机制。美国就是其中的一个典型例子。在美国，溢油管理涉及到多个机构，如联邦机构，美国政府和国际机构。本文以历史上最为严重的溢油事故墨西哥湾 “ 2010 年深水地平线钻井平台溢油事故”为例，分析了美国政府对溢油的应对。该事件已经聚集了大量研究，本文综合了众多学者分析美国应对该事件所得出的不同思想，包括成功之处，失败之处，以及他国可以借鉴的地方。

经分析，美国政府在此次墨西哥湾溢油事件的表现虽然可圈可点但仍有遗憾之处，因为至今为止溢油仍在蔓延并且影响仍未消除。国际合作和技术上的改进可以使其结果原本更为成功。美国应对此次溢油事件的成功之处在于每个美国人即便是普通公众都能参与到其中，并将其视为一次灾难。其他国家应该从中汲取经验并且在以后类似的事件中要促使利益相关者积极参与到环境保护和修复中来。

关键词： 美国政府对溢油事件的应对；溢油；2010 年深水地平线钻井平台溢油事故；美国国家海洋与大气局；美国环境保护局

LIST OF ABBREVIATIONS AND SYMBOLS USED

ACPs	Area Contingency Plans
BP	British Petroleum
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
CLC	International Convention on Civil Liability for Oil Pollution damage 1992
CRW	Chemicals, Chemical Reactivity Worksheet
CRW	Chemicals, Chemical Reactivity Worksheet
CWA	Clean Water Act
DOI	Department of Interior
DOJ	Department of Justice
DOS	Department of State
DOT	Department of Transport
EGs	Environment Groups
Eos	executive orders
EPA	Environmental Protection Agency
ESI	Environmental Sensitivity Index
FOSC	Federal On-Scene Coordination
FOSCR	FOSC representative
FUND	Fund for the Compensation for the Oil Pollution Damage
FWPCA	Federal Water Pollution Control Act Amendments
GIS	Geographical Information Systems
GIS	Geographic Information System
GNOME	General NOAA Operational Modeling Environment
ICPs	Incident Command Post
IMO	International Maritime Organization
ITOPF	International Tanker Owners Pollution Federation
ITOPF	International Tanker Owner Pollution Federation
MACT	Maximum Achievable Control Technology

MARPOL	International Convention for the Pollution prevention from Ship
MCA	Maritime and Coastguard Agency
MMS	Minerals Management Services
NAAQS	National Ambient Air Quality Standards
NCP	National Contingency Plan(National Oil and Hazardous Substances Pollution Contingency Plan
NGOs	Non governmental Organizations
NIC	National Incident Commander
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRDA	Natural Resource Damage Assessment
NRS	National Response System
NRT	National Response Team
OPA 90	Oil Pollution Act of 1990
OPRC	International Convention on Oil Pollution preparedness, Response and Cooperation
OSC	On-Scene Coordinator
OSLT	Oil spill Liability Trust Fund
OSPPR	Oil Spill Prevention, Preparedness and Response
RRTs	Regional Response Teams
RRTs	Regional Response Teams
SARA	Superfund Amendments and Reauthorization Act
SEEEC	Sea Empress Environmental Evaluation Committee
SIPs	State Implementation Plans
SONS	Spill of National Significance
UAC	Unified Area Commander
UNCLOS	United Nations Convention on Law of the Sea
UNEP	United Nations Environment Program
VTS	Vessel Traffic Service

LIST OF FIGURES

LIST OF TABLES

Chapter 1 INTRODUCTION

1.1 General Introduction

Oil is the dominant and the most important primary energy source in the world. The availability of crude oil and its refined products are a key economic driver behind all economic activities undertaken by society today (Burgherr, 2007). Fossil fuels provide more than 90 percent of the world's transportation and commercial energy needs of most of the countries in the world (Smil, 2000).

Although oil is very critical to the economic growth, oil reserves are not equally distributed among the countries of the world. According to the British Petroleum Statistical Review Report (2010), 54.4 percent of the world's proven oil reserves lie in the countries of the Middle East. These countries produce 30.3 percent of the total oil production while the United States, the European Union, and China account for half of the world's total oil consumption. The geographical isolation of oil producers and oil consumers necessitates that crude oil and refined products be transported across great distances from the producer to the consumer markets (Burgherr, 2007).

Presently, almost 60 percent of the world's crude oil extraction is exported, while more than 130 countries import crude oil and refined products (Smil, 2000).

The present isolation of producers in locations where oil reserves lie and the location of the consumers along with the intensive use of oil worldwide has resulted in the development of increasingly complex sea transportation (Connolly *et al.*, 2003). Shipping has provided countries with an efficient and economical means of transport especially for oil. Increasingly, however, marine transportation of oil has inevitably resulted in accidental oil spills. About two-thirds of the world's petroleum trade including that in crude oil and refined or processed products is carried on through ships along international sea lanes (BP, 2011). Over the years, the amount of oil transported by ships has significantly increased as the world economies have expanded. In the past few decades, the safety and preventive measures introduced both, internationally and nationally, have reduced the number of spills and the quantity of accidental releases into the sea. The recent oil spill data also show that the amount of oil spilled from ships has decreased.

However, recent incidents show that no one can predict an oil spill; yet, when it happens, its consequences can be far reaching. Marine oil spills are unpredictable events that may cause significant damages to the environment, the wildlife, and the coastal communities. Oil transportation has historically been responsible for many of the larger marine oil spills. More recently, there has been an increasing number of major oil spills occurring due to offshore exploration and production. Therefore, the coastal states are concerned, and are mandatory required to take the necessary measures to respond to oil spills in an effective manner to reduce and minimize the environmental, economic, and social impacts of oil spills.

Some oil spill accident which happened pushed the US Government as a coastal state, to take part in establishing responses, preventions, preparedness precisely legislative response.

In 2010 in Gulf of Mexico happened the spills and were classified among the Spill of National Significance.

US government was made an effort to deal with it. Different agencies had participated, scientists, Journalists even public, in considering international legislative perspective.

Based on some US Acts (OPA...) and plans (NCP…); claims had been paid by the company in charge (B.P.) and restorations had been put into consideration.

1.2 Problem statement

Rapid economic growth has caused an important increase in oil consumption in recent years.

Currently, a significant amount of oil is spilled into seas from operational discharges of ships as well as from accidental tanker collisions and groundings. The oil spill accident is very harmful to the ocean environment and the health of mankind.

However managing oil spill accidents is not an easy task for coastal states, up to now different countries have not yet established strong legislations (rules and policies) to control oil spill.

Effective oil spill governance requires strong legislation, and working together fro preparedness and prevention of these hazardous incidents.

This research evaluates current oil spill governance using the Deepwater horizon oil spill as an example.

Deepwater Horizon oil has been the first spill classified among the Spill of Significance due to the large impacts it had caused into Gulf of Mexico marine environment.

Despite the US Government response, the oil spills in Deepwater Horizon continue to impact negatively the environment. This has raised so many questions about the effectiveness of US Government response on Deepwater Horizon oil spill.

However many lessons can be learned from the U.S. government response despite the gaps.

1.3 Hypothesis

During this research some hypothesis were verified firstly if The Deepwater Horizon oil spill response was successful and secondary if Oil spill could not be cleaned up totally from the marine environment

1.4 Objectives of the Study

The present study has as main objective of evaluation U.S. government Oil spill management through 2010 Deepwater Horizon Oil Spill.

It has other Specifique objectives such as to Evaluate legislatives and responsible agencies of Oil Spill in U.S., elaborate Lessons learned from US governance of oil spill; Analyze different sides good and bad of US response and give suggestions to other countries; precisely highlight what have been good and what have been bad in terms of laws and governance so that other countries can implement the good sides and avoid the bad side.

\